Saskatchewan
Agriculture
and Food

Crop Planning Guide 2002

SPECIALTY CROPS

pulses, oilseeds, spices and other crops

Specialty Crop Planning Guide 2002

102-03955/

Specialty crops are now produced on over 6.5 million acres each year in Saskatchewan. Producers should evaluate the costs and the risks associated with these crops before deciding what to plant in 2002.

The crop budgets in this publication provide an estimate of costs based on recommended production practices for each crop. For some crops, the best production methods are not firmly established and cost estimates are based on reasonable estimates of production systems.

Large variations in yields and costs exist among producers depending on location, farm size, age of machinery, etc. The budgets presented here should be used as guidelines only. They do not represent actual costs and returns on your farm. Your past farm records adjusted for expected changes in 2002 can be used to develop your own budgeting figures. Enter estimates for your own farm on the enclosed worksheet.

The cropping budgets are based on either re-cropping or fallow cropping depending on the prevalent cropping practices or agronomic recommendations. Producers seeding a crop in a different rotation should adjust the fallow costs accordingly.

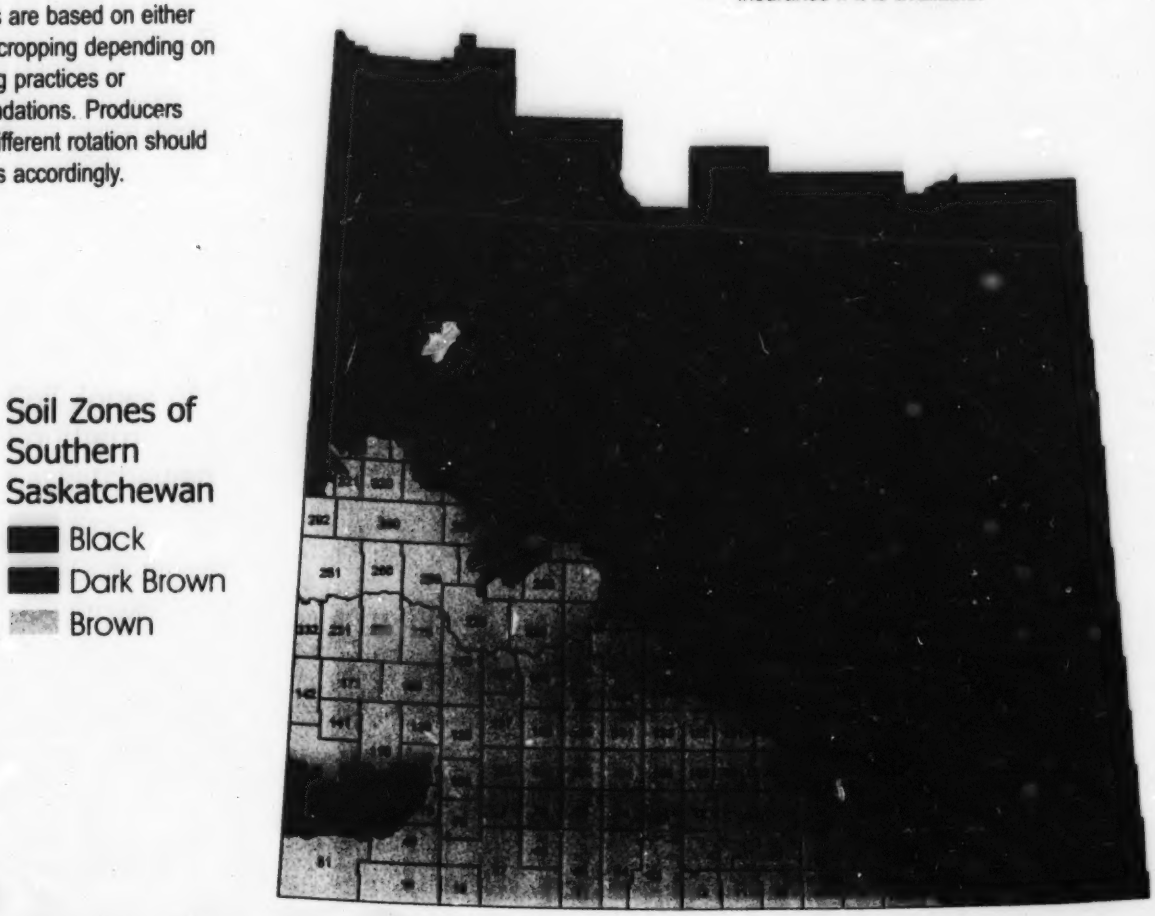
The figures provide an estimate of variable expenses, investment and depreciation (on buildings and machinery) and a land cost. The yields are based on averages provided by the Statistics Branch of Saskatchewan Agriculture and Food. For crops with insufficient yield history, yields were based on Saskatchewan Agriculture and Food Special Crop surveys and data from Saskatchewan's Crop Development Centre. Crop prices are based on historical prices adjusted for anticipated supply and demand.

Short-term decisions among various crops can be made on the basis of returns over variable expenses. Long-term decisions must include all costs, including fixed costs for machinery, buildings and land. The decision to include a new crop in your crop rotation may be longer-term if changes to machinery and buildings requirements are necessary for the new crop.

Producers considering replacing some of their traditional crops with new crops should give special consideration to the higher risk associated with specialty crops. Many specialty crops have higher profit potential than traditional crops but also have greater variations in yield, grade and price. Some require an extended growing season, or have particular climate requirements, which could produce very low yields in some years. Markets for some of these crops are small and variable.

Use the following methods to reduce risk:

- Start with a small acreage until production methods have been learned;
- Contract for price and delivery if markets are uncertain;
- Maintain crop diversity by limiting the acreage of a new crop to a reasonable portion of your total acreage;
- Practice the best weed control available; and
- Insure against yield loss with crop insurance if it is available.



Assumptions

Seed including cleaning:

Pulse:

- Large Green lentil 90 lb/ac at $0.21/lb
- Small Green lentil 45 lb/ac at $0.18/lb
- Red lentil 45 lb/ac at $0.20/lb
- Green peas 180 lb/ac at $0.13/lb
- Yellow peas 180 lb/ac at $0.12/lb
- Feed peas 180 lb/ac at $0.10/lb
- Pinto Beans 100 lb/ac at $0.40/lb
- Desi Chickpeas 95 lb/ac at $0.30/lb
- Kabuli Chickpeas 9mm 150 lb/ac at $0.54/lb
- Kabuli Chickpeas 7mm 110 lb/ac at $0.41/lb
- Fababeans 180 lb/ac at $0.20/lb

Oilseed:

- Early Short Sunflower 7 lb/ac at $2.50/lb
- Standard Sunflower 5 lb/ac at $5.25/lb
- Yellow Mustard 10 lb/ac at $0.71/lb
- Oriental Mustard 8 lb/ac at $0.44/lb
- Brown Mustard 10 lb/ac at $0.44/lb
- Safflower 30 lb/ac at $0.30/lb

Spice and Other Crops:

- Canary seed 35 lb/ac at $0.36/lb
- Buckwheat 50 lb/ac at $0.25/lb
- Caraway 10 lb/ac at $0.87/lb
- Dill 8 lb/ac at $0.75/lb
- Coriander 25 lb/ac at $0.43/lb
- Fenugreek 30 lb/ac at $0.47/lb
- Borage 15 lb/ac at $3.50/lb
- Seed prices used were either an average of common seed and seed grower prices or just seed grower prices.

Fertilizer:

Nitrogen based on 46-0-0 at $267/tonne ($.26 N/lb)

- Black soil zone: 30 lb N/ac fallow and 60 lb N/ac stubble
- Dark Brown soil zone: 25 lb N/ac fallow and 50 lb N/ac stubble
- Brown soil zone: 20 lb N/ac fallow and 45 lb N/ac stubble
- Nitrogen on lentils, peas, chickpeas, fababeans and fenugreek 6 lb N/ac based on 50 lb of 12-51-0
- Nitrogen on Pinto Beans 50 lb N/acre

Phosphorus based on 12-51-0 $336/tonne ($.24 P/lb)

- All pulse crops 25 lb P/ac fallow and stubble
- Black soil zone 30 lb P/ac fallow and stubble
- Dark Brown soil zone 25 lb P/ac fallow and stubble
- Brown soil zone 20 lb P/ac fallow and stubble

Sulfur based on 20-0-0-24 at $241/tonne ($.23 S/lb)

- Sulfur on mustard at 10 lb S/acre
- *Caraway* is a three-year crop and sown with a cover crop. In the year of establishment, the fertilizer costs are attributed to the cover crop. In its second and third year, 50 lb of N/ac/year are applied to the crop.

Chemicals:

Herbicides:

- All crops were 100% treated for wild oats where registered except for canary seed which was 25% treated (to be consistent with the soil zone guides)
- Caraway: for wild oat control Poast and Edge are registered. Caraway takes a year to establish therefore, in the first year, chemical costs were applied to the cover crop.
- All crops were 100% treated for broadleaves where registered. As well, no broadleaf application was applied to the mustards to keep consistent with the soil zone guides.
- Fenugreek and Borage: received a pre plant burn off only because no chemicals are registered for use incrop.

Others:

- All crops receive seed treatment or inoculation except dill and borage.
- Canary seed: insect control 20%
- Mustards: insect control 10%
- Lentils: fungicide 20%, desiccant 100%
- Peas: desiccant 25% except field pea, which is at 10%
- Pinto beans: fungicide 75%
- Chickpeas:
  - Desi - 50% fungicide
  - Kabuli Large - 100% fungicide, two applications
  - Kabuli Small - 100% fungicide, one application
- Sunflowers: insect control 20%

- **Operating costs** are based on recommended production practices in the respective soil zones.
- **Fuel costs** are based on estimated fuel consumptions for the various farming operations with diesel fuel priced at 42 cents per liter.
- **Machinery repair** rates are 6% of machinery investment per year for peas, lentils, pinto beans, chickpeas, fababeans, sunflowers and safflower and 5% for all other crops.
- **Saskatchewan Crop Insurance** premiums are based on coverage at 70% of Risk Area(s) average yield plus 20%. Not all crops are insurable through Crop Insurance.
- **Building repair** rates are 5% of building investment per acre.
- **Operating interest** is calculated on all cash operating costs at 5.3% for 6 months on all crops, 18 months for fallow.
- **Machinery depreciation** is calculated at 10% of machinery investment per year on a straight-line basis.
- **Building depreciation** is based on a specified building investment for each soil zone multiplied by 5% per year on a straight-line basis.
- **Average machinery investment** is calculated for each soil zone. An additional machinery investment of $30 per seeded acre is assumed for most crops in this guide due to their specialized nature.
- **Investment cost** on building and machinery investment is calculated at a rate of 5.3% on the investment per acre.
- **Land investment cost** is based on average land values in each soil zone multiplied by 4.5% as a return on investment.
- **Crop prices** for 2002 production are farm gate price estimates for 2002 crop production, provided by Saskatchewan Agriculture & Food in December 2001.
- **Crops** that appear in both the Crop Planning Guides and the Specialty Crops Guide that share the same soil zone and are continuous cropped have their yields averaged between Saskatchewan Agriculture and Food's ten-year averages and Saskatchewan Crop Insurance yields plus 20% values. These crops are laird lentil (dark brown soil zone), feed pea (black soil zone), yellow mustard (brown soil zone) and canary seed (dark brown soil zone).
- **Labour and management** – These budgets do not include an estimate for owner/operator labour and management. This value varies greatly and farm managers need to determine their own actual labour and management cost.

For more information, contact your Extension Agrologist or the Crop Development Branch of Saskatchewan Agriculture & Food at (306) 787-4660.

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SPECIALTY CROP HIGHLIGHTS	Type	lb/ bushel	Adaptation	Seed Rate lb/acre	Seeds/lb	Weed Control	Crop H (inch
Large Green Lentil	Annual pulse	60	Indeterminate crop, requires some stress to mature seed. Seed early.	90	5,000-7,000	Several registered herbicides	16-20
Small Green Lentil	Annual pulse	60	Requires some stress to mature seed. More determinate than Large Green. Seed early.	45	11000-13,500	Several registered herbicides	12-16
Red Lentil	Annual pulse	60	Requires some stress to mature seed. More determinate than Large Green. Seed early.	45	11000 -13500	Several registered herbicides	12-16
Green Pea	Annual pulse	60	Prefers moist, cool conditions. Seed early.	150-200	1,600-2,300	Several registered herbicides	20-30
Yellow Pea	Annual pulse	60	Prefers moist, cool conditions. Seed early.	150-200	1,300-2,300	Several registered herbicides	20-43
Feed Pea	Annual pulse	60	Prefers moist, cool conditions. Seed early.	120-180	1,300-2,300	Several registered herbicides	20-43
Pinto Bean narrow row & dryland	Annual pulse	60	Heat and moisture loving. Seed in late May. No frost tolerance.	80-100	1,100-1,600	Several registered herbicides. Seed treatment recommended.	12-20
Desi Chickpea	Annual pulse	60	Indeterminate crop, Brown & Dark Brown Soils	80-90	1,350-2,300	Sencor, Poast & Select herbicides are registered. Select clean fields.	12-20
Kabuli Chickpea 9 mm	Annual pulse	60	Indeterminate crop, Brown Soils. Seed after soil reaches 10C at seeding depth	120-180	1,100-2,000	Sencor, Poast & Select herbicides are registered. Select clean fields. Seed treatment recommended.	14-20
Kabuli Chickpea 7mm				100-110	1,200-2,200		14-20
Fababean	Annual pulse	60	High moisture areas or irrigation	120-180	800-1,350	Numerous herbicides registered	40-60
Safflower	Annual oilseed or birdseed	40	High heat requirements. Brown and Dark Brown soil zones.	22-30	4,500-5,500	Trifluralin, Edge and Poast are registered herbicides	20-30
Standard Sunflower	Annual oilseed	30	High heat requirements, South-east Saskatchewan	5	4,500-6,800	Trifluralin, Edge and Select are registered herbicides	60
Early, short Statured Sunflower	Annual oilseed	30	Moderate heat requirements. Brown, darkbrown and thin black soils.	7-10	11,000-13,500	Trifluralin, Edge and Select are registered herbicides	24-35
Yellow Mustard	Annual oilseed	50	Better seed quality in drier areas	9-12	100,000	Several registered herbicides	30-40
Brown Mustard	Annual oilseed	50	More heat and drought tolerant than canola	7-10	200,000	Several registered herbicides	40-48
Oriental Mustard	Annual oilseed	50	More heat and drought tolerant than canola	5-9	200,000	Several registered herbicides	40-48
Fenugreek	Annual legume	60	Indeterminate crop. Brown and Dark Brown soil zones. Late maturing	22-30	23,000-27,000	No registered herbicides. Select clean fields.	12-24
Buck wheat	Annual grain	48	Widely adapted but sensitive to frost anytime and heat and drought during seed set.	35-55	13,000-16,000	Several herbicides registered for grassy weed control	40-60
Canary Seed	Annual birdseed	50	Moderate moisture requirements, shallow rooted	22-35	65,000	Several herbicides registered	40-60
Borage	Annual oilseed	34	Moisture loving, seed late to increase GLA content of the oil	9-15	13,500 (est.)	No registered herbicides. Select clean fields	24-40
Dill	Annual spice	27	Yields best in cool conditions, moderate moisture	5-9	90,000 (est.)	Poast and Edge are registered herbicides.	40
Caraway	Triennial spice	35	Widely adapted, yields best under moderate moisture	10	90,000 (est.)	Poast, linuron and Edge are registered.	12-28
Coriander	Annual	22	Heat loving, late maturing	25	50,000	Poast, linuron and Edge are	24-40

Days to Maturity	Harvest Method	Safe Storage Moisture	Crop Quality Factors	Markets	Expected Yield (lb/acre)
53 days to flower	Swath or desiccate and direct combine. Pick-up reels, floating cutter bar preferred.	Below 14%	Light green seed	Human food	900-1200
49 days to flower	Swath or desiccate and direct combine. Pick-up reels, floating cutter bar preferred.	Below 14%	Light green seed	Human food	1000-1400
49 days to flower	Swath or dessicate and direct combine. Pick up reels, floating cutter bar preferred.	Below 14%	Red seed, smaller than large green lentil. Seed colour grading factors are different than green lentil.	Human food	1000-1300
92 - 98	Swath or desiccate and direct combine. Pick-up reels and lifters preferred.	Below 16%	Uniform green seed free from damage. Less than 5% bleached	Human food or feed	1250-2000
93 - 104	Swath or desiccate and direct combine. Pick-up reels and lifters preferred.	Below 16%	Large round smooth yellow seed free from damage.	Human food or feed	1250-2400
93 - 104	Swath or desiccate and direct combine. Pick-up reels and lifters preferred.	Below 16%	Various sizes and colours	Feed	1250-2400
100 - 112	Pick-up reel and floating cutter bar required. Swathing prefered. Swath when tough.	14% - 16%	Sound whole seed, avoid seed damage	Human food	900-1450 dryland
110 - 120	Direct combine or swath and combine	Below 14%	Sound whole seed,avoid seed damage	Human food	1050-1450
110 - 125	Direct combine or swath and combine	Below 14%	Sound whole seed, avoid seed damage, light coloured seed coat and green cotyledons.	Human food	900-1300
110 - 120					1000-1400
125 - 135	Swath and combine	Below 16%	Avoid splitting and cracking	High protein feed	1000-1600
115 - 125	Direct combine preferred	Below 9.5%	Bright white for birdseed, well filled	Birdseed or edible oil	600-750
110 - 125	Direct combine with sunflower attachment	Below 10%	Premiums for high oil content	Edible oil and confection	700-1000
99 - 103	Swath and combine or direct combine with standard equipment	Below 10%	Premiums for high oil content	Edible oil and birdseed	700-1000
93	Direct combine or swath and combine	Below 9.5%	Bright yellow seed	Condiment	550-700
94	Swath and combine	Below 9.5%	Dark reddish brown seed	Condiment	620-900
91 - 93	Swath and combine	Below 9.5%	Bright golden seed	Condiment	620-900
115 - 130	Resists shattering, direct combine or swath and combine	Below 12%	Golden coloured seed	Spice ingredient, pharmaceutical, health food	550-900
80 - 90	Swath when 75% mature	Below 16%	Tan coloured seed, do not mix old (reddish-brown dehulled) and new(greenish dehulled) crop	Whole seed	550-700
95 - 100	Swath and combine or direct combine.Shatter resistant.	Below 13%	Avoid dehulling seed	Birdseed	700-1050
85	Ripens unevenly, shatters most of the seed, swath.	Below 10%	Avoid volunteer cereal crops which are difficult to separate	Oil extracted for neutraceutical	90-200
105 - 115	Swath and combine	Below 10%	Clean seed, oil content	Flavouring	270-1000
Triennial matures in early August	Swath when begins to shatter	Below 10%	Brown with dark stripes. Avoid green seed.	Flavouring	450-700
95-110	Direct combine or swath then immediately	Below 10%	Fully mature brown seeds, splits	Flavourings and	550-800

CROP PRODUCTION COSTS 2002

SPECIALTY CROPS

PULSE CROPS

	#1 Large Green Lentil	#1 Small Green Lentil	#1 Red Lentil	#1 Green Peas	#1 Yellow Peas	Feed Peas	Pinto Bean	#1 Desi Chickpea	#1-9mm Kabuli Chickpea	#1-7mm Kabuli Chickpea	Fababean (Feed)
Type of rotation	Recrop	Recrop	Recrop	Recrop	Recrop	Recrop	Fallow	Recrop	Recrop	Recrop	Recrop
Rotation years required to grow this crop	1	1	1	1	1	1	2	1	1	1	1
Soil zone	Dark Brown	Dark Brown	Dark Brown	Black	Black	Black	Dark Brown	Brown	Brown	Brown	Black
REVENUE PER ACRE											
Estimated yield (bushel/acre; lb/acre)	1218	1263	1200	29.9	31.9	29.1	1000	1400	1100	1400	1331.3
X Estimated on-farm market price per bushel or per pound	0.17	0.14	0.16	4.85	4.60	3.87	0.25	0.16	0.25	0.19	0.09
A Estimated Gross Revenue per acre	207.06	176.82	192.00	145.02	146.74	112.62	250.00	224.00	275.00	266.00	119.82
EXPENSES PER ACRE											
Variable Expenses/acre											
Seed	18.90	8.10	9.00	23.40	21.60	18.00	40.00	28.50	81.00	45.10	36.00
Fertilizer: Nitrogen	1.56	1.56	1.56	1.56	1.56	1.56	13.00	1.56	1.56	1.56	1.56
Phosphorus	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Sulfur & Other	0	0	0	0	0	0	0	0	0	0	0
Chemical:[3] Herbicides /Fungicides	35.24	35.24	35.24	22.28	22.28	20.30	64.41	27.65	50.69	35.33	37.49
Insecticides	0	0	0	0	0	0	0	0	0	0	0
Seed Treatment	1.80	0.90	0.90	3.60	3.60	3.60	1.58	1.90	10.50	7.70	7.20
Machinery Operating: Fuel	9.24	9.24	9.24	9.24	9.24	9.24	7.98	9.24	9.24	9.24	9.24
Repair	10.50	10.50	10.50	11.40	11.40	11.40	10.50	9.00	9.00	9.00	9.60
Custom Work & Hired Labour	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Crop Insurance Premium	5.67	5.67	5.67	2.26	2.26	2.26	0.00	6.13	11.67	11.67	3.18
Utilities & Miscellaneous	4.29	4.29	4.29	4.36	4.36	4.36	4.29	2.90	2.90	2.90	4.36
Interest on Variable Expenses	2.53	2.22	2.24	2.29	2.24	2.09	3.96	2.52	4.87	3.45	3.09
B Total Variable Expenses	98.73	86.72	87.64	89.39	87.54	81.81	154.71	98.39	190.43	134.95	120.72
Other expenses/acre											
Building Repair	1.20	1.20	1.20	1.60	1.60	1.60	1.20	0.90	0.90	0.90	1.60
Property Taxes	4.73	4.73	4.73	5.28	5.28	5.28	4.73	4.17	4.17	4.17	5.28
Insurance & Licences	1.81	1.81	1.81	2.14	2.14	2.14	1.81	1.18	1.18	1.18	2.14
Machinery Depreciation	17.50	17.50	17.50	19.00	19.00	19.00	17.50	15.00	15.00	15.00	16.00
Building Depreciation	1.20	1.20	1.20	1.60	1.60	1.60	1.20	0.90	0.90	0.90	1.60
Machinery Investment	9.19	9.19	9.19	9.98	9.98	9.98	9.19	7.88	7.88	7.88	8.40
Building Investment	1.26	1.26	1.26	1.68	1.68	1.68	1.26	0.95	0.95	0.95	1.68
Land Investment	15.30	15.30	15.30	17.33	17.33	17.33	15.30	13.95	13.95	13.95	17.33
Total Other Expenses	52.19	52.19	52.19	58.61	58.61	58.61	52.19	44.92	44.92	44.92	54.03
+ Labour and Management[4]											
Total Expenses per acre	150.91	138.91	139.83	148.00	146.15	140.42	206.90	143.31	235.35	179.87	174.75
+ Summerfallow cost	0	0	0	0	0	0	49.35	0	0	0	0
C Total Rotational expense	150.91	138.91	139.83	148.00	146.15	140.42	256.25	143.31	235.35	179.87	174.75
RETURNS PER ACRE											
Return over Variable Expenses (A-B)	108.33	90.10	104.36	55.62	59.20	30.80	95.29	125.61	84.57	131.05	(0.90)
Return over Total Rotational Expenses (A-C)	56.15	37.91	52.17	(2.98)	0.59	(27.80)	(6.25)	80.69	39.65	86.13	(54.93)
BREAK-EVEN YIELD PER ACRE (per bushel or per pound)											
To Cover Variable Expenses	581	619	548	18	19	21	619	615	762	710	1341
To Cover Total Rotational Expenses	888	992	874	31	32	36	1025	896	941	947	1942
BREAK-EVEN PRICE (per bushel or per pound)											
To Cover Variable Expenses	0.08	0.07	0.07	2.99	2.74	2.81	0.15	0.07	0.17	0.10	0.09
To Cover Total Rotational Expenses	0.12	0.11	0.12	4.95	4.58	4.83	0.26	0.10	0.21	0.13	0.13

[3]Yield and costs are for Dryland Pinto Beans only.

[4]Expenses shown are for two years (year 1 and 2) and revenue is from two years (year 2 and 3) of caraway seed production. Average return per year over total expenses is $421.80 divided by two equals $210.90 per year. The expenses associated with the cover crop in year 1 are covered by the revenue from the cover crop.

OILSEED CROPS

Early, Short Sunflower	Standard Sunflower	Yellow Mustard	Oriental Mustard	Brown Mustard	Safflower
Recrop	Recrop	Recrop	Recrop	Recrop	Fallow
1	1	1	1	1	2
Dark Brown	Dark Brown	Brown	Brown	Brown	Brown
922	1003	695	835	785	680
0.12	0.15	0.25	0.17	0.17	0.15
110.64	150.45	173.75	141.95	133.45	102.00
17.50	26.25	7.10	3.52	4.40	9.00
13.00	13.00	11.70	11.70	11.70	5.20
6.00	6.00	4.80	4.80	4.80	4.80
0	0	2.30	2.30	2.30	0
24.22	24.22	16.00	16.00	16.00	16.73
0.54	0.54	0.38	0.38	0.38	0
0.18	0.13	7.30	5.84	7.30	0.60
9.24	9.24	8.82	8.82	8.82	7.14
9.42	9.90	6.00	6.00	6.00	7.80
4.00	4.00	3.50	3.50	3.50	3.00
1.65	2.00	2.46	2.09	1.93	0
4.29	4.29	2.90	2.90	2.90	2.90
2.36	2.61	1.92	1.78	1.84	1.50
92.40	102.18	75.18	69.62	71.86	58.67
1.20	1.20	0.90	0.90	0.90	0.90
4.73	4.73	4.17	4.17	4.17	4.17
1.81	1.81	1.18	1.18	1.18	1.18
15.70	16.50	12.00	12.00	12.00	13.00
1.20	1.20	0.90	0.90	0.90	0.90
8.24	8.66	6.30	6.30	6.30	6.83
1.26	1.26	0.95	0.95	0.95	0.95
15.30	15.30	13.95	13.95	13.95	13.95
49.44	50.66	40.35	40.35	40.35	41.87
141.84	152.84	115.52	109.97	112.21	100.54
0	0	0	0	0	41.07
141.84	152.84	115.52	109.97	112.21	141.61
18.24	48.27	98.57	72.32	61.59	43.33
(31.20)	(2.39)	58.23	31.98	21.24	(39.61)
770	681	301	410	423	391
1182	1019	462	647	660	944
0.10	0.10	0.11	0.08	0.09	0.09
0.15	0.15	0.17	0.13	0.14	0.21

SPICE AND OTHER CROPS

Canary Seed	Buckwheat	Caraway	Dill	Coriander	Fenugreek	Borage
Recrop	Fallow	Recrop	Fallow	Recrop	Fallow	Fallow
1	2	3	2	1	2	2
Dark Brown	Dark Brown	Dark Brown	Black	Dark Brown	Brown	Dark Brown
947	609	593	800	765	800	156
0.16	0.10	0.57	0.42	0.29	0.21	1.80
151.52	60.90	676.02[2]	336.00	221.85	168.00	280.80
12.60	12.50	8.70	6.00	10.75	14.10	52.50
13.00	6.50	26.00	7.80	13.00	1.56	6.50
6.00	6.00	6.00	7.20	6.00	4.80	6.00
0	0	0	0	0	0	0
11.65	14.68	46.32	13.95	29.43	3.39	3.39
1.15	0	0	0	0	0	0
0.88	1.25	0.25	0.00	0.63	1.35	0
8.40	7.93	16.80	7.14	8.40	7.14	7.14
7.25	7.25	15.50	8.00	8.25	6.50	7.75
5.25	3.00	6.00	3.00	3.00	3.00	3.00
2.35	0	16.52	0	3.89	0	0
4.29	4.29	8.58	4.36	4.29	2.90	4.29
1.91	1.67	5.27	1.51	2.30	1.17	2.38
74.73	65.12	155.94	58.96	89.93	45.91	92.94
1.20	1.20	2.40	1.60	1.20	0.90	1.20
4.73	4.73	9.46	5.28	4.73	4.17	4.73
1.81	1.81	3.62	2.14	1.81	1.18	1.81
14.50	14.50	31.00	16.00	16.50	13.00	15.50
1.20	1.20	2.40	1.60	1.20	0.90	1.20
7.61	7.61	16.28	8.40	8.66	6.83	8.14
1.26	1.26	2.52	1.68	1.26	0.95	1.26
15.30	15.30	30.60	17.33	15.30	13.95	15.30
47.61	47.61	98.28	54.03	50.66	41.87	49.14
122.34	112.73	254.22	112.99	140.59	87.78	142.08
0	49.35	0	55.60	0	41.07	49.35
122.34	162.08	254.22	168.59	140.59	128.85	191.43
76.79	(4.22)	520.08	277.04	131.92	122.09	187.86
29.18	(101.18)	421.80[2]	167.41	81.26	39.15	89.37
467	651	137	140	310	219	52
765	1621	223	401	485	614	106
0.08	0.11	0.13	0.07	0.12	0.06	0.60
0.13	0.27	0.21	0.21	0.18	0.16	1.23

[1]Only registered chemicals are included.

[2]These budgets do not include an estimate for owner/operator labour and management. This value varies greatly and depends on both the farm manager's needs as well as the ability of the farm to generate income. Farm managers need to determine their own actual labour and management costs and add it to total expenses.